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# **Wildlife Mitigation and Monitoring Plan**

Prepared for  
**Peak Minerals – Sevier Dry Lake**

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Prepared by



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# Peak Minerals – Sevier Dry Lake Wildlife Mitigation and Monitoring Plan

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## 1.0 Introduction

Peak Minerals, Inc., (Peak Minerals) is proposing to conduct exploratory testing in Sevier Lake in Millard County, Utah (**Figure 1**). This Wildlife Mitigation Plan (Plan) has been developed in accordance with Stipulation 9 presented in Section 2.2.2 of the Sevier Lake Competitive Potash Leasing Proposal Environmental Assessment (“Leasing EA”; BLM 2011) and is specifically prepared to ensure adequate monitoring and protection of wildlife during the exploratory activities associated with the activities analyzed under the Sevier Dry Lake Exploratory Testing EA (“Exploratory EA”).

Stipulation 9 requires that a Wildlife Mitigation Plan be submitted as part of any mining or exploration plan and will describe actions to be taken to avoid, minimize, or reduce any future impacts to wildlife. The plan shall include but will not be limited to, survey/monitoring of species; the rescue, recovery, reporting and rehabilitation of injured wildlife as practicable; recovery and reporting of wildlife mortalities; and mitigation and adaptive management strategies. The species to be monitored shall include species on the Wildlife Action Plan, developed by the Utah Division of Wildlife Resources, and the Partners in Flight priority species. The lessee shall submit a report annually discussing mortality rates and the effectiveness of any mitigation measures taken..

The Proposed Action as described in the Exploratory EA would include three activities as part of the exploratory phase of development: Confirmation of Brine Resource, Hydrology Analysis, and Screening-Level Geotechnical Study.

Peak Minerals will conduct proposed brine resource confirmation sampling to develop a better understanding of the distribution of dissolved salts in groundwater occurring within the Sevier Lake potassium lease. Data from historic exploration indicates a substantial resource of mineral-saturated brine, but the testing data is nearly twenty years old and is not adequate for developing a site-specific operational extraction plan. Brine resource sampling will verify the economic viability of potential commercial production of marketable mineral products at Sevier Lake.

Peak Minerals has applied to collect baseline hydrologic data for future use in evaluating potential hydrologic impacts that could result from brine removal and freshwater extraction for project operations. The hydrologic investigations will evaluate groundwater and surface water resources to establish baseline conditions prior to the extraction of brine. These baseline data would be used for BLM’s NEPA analysis that would be required should a commercial minerals extraction project be proposed for development. Conducting the hydrologic survey prior to surface disturbing activities is a condition of the Leasing EA (BLM 2011, Section 2.2.2).

Peak Minerals would conduct a screening-level geotechnical study to assess the conceptual design and feasibility of structures that would be built to support the operation of a potash facility. This information will contribute to determining the feasibility of developing a commercial project. Detailed aspects of each activity are presented in the *Exploration Work Plan* (Peak Minerals, 2011), and are summarized in the Exploratory EA.

## **2.0 Survey and Monitoring Plan**

### **2.1 Species to be Evaluated**

The species to be monitored shall include species on the Wildlife Action Plan (WAP), developed by the Utah Division of Wildlife Resources (UDWR, 2005), and the Partners in Flight priority species (UDWR, 2002). The WAP includes a total of 44 bird and 39 mammal species that are designated either Tier I (federally threatened, endangered, or candidate species), Tier II (state species of concern), or Tier III (linked to an at risk habitat, have had a substantial decrease in population size, or for which insufficient information is available to understand the species risk status), and the PIF lists 24 priority avian species occurring in the state. However, only a small percentage could potentially be affected by the project due to the unique habitats in and near the exploration areas.

Bird surveys were conducted from March through September 2011 for the leasing EA and no consistent use by any birds was documented on the lakebed or in the solar evaporation ponds present; however, typical west Utah salt desert shrub upland species were present around the leasing areas (Exploratory EA Appendix E; BLM 2011). Migratory birds, primarily shorebirds and waterfowl may use the area, and raptors such as bald and golden eagles, ferruginous hawk, prairie falcon, burrowing owls, rough-legged hawk, and northern harriers may occur in or near the proposed Project (BLM 2011).

Pronghorn are the primary large mammal species known to occur in the exploration area and on adjacent lands, and mule deer occur nearby in off-lease habitats in the Cricket Mountains and House Range. Other Utah sensitive species with known or potential occurrence in the project are presented in Table 3-1 of the Exploratory EA. Additionally, the 1997 Plan of Operations, Sevier Lake Project references the 1987 BLM assessment of Crystal Peak's project (BLM 1987), notes that wildlife near the lake consisted of antelope, rodents, and reptiles.

The dry lakebed's wildlife habitat value is very low and supports only incidental use by animal species (BLM, 2011). However, exploration and mining activities could result in disturbance of wildlife that use the area. Therefore, survey and monitoring of the use patterns of the species that do utilize the exploration area and vicinity is appropriate to ensure that potentially occurring impacts resulting from the project are detected if present.

## **2.2 Survey Methodology**

General avian use surveys and big game counts in and near the exploration area will provide sufficient data to compare with baseline data collected for the leasing EA, which will serve as baseline data for the exploratory activity, and accurately assess impacts to species identified in the WAP and PIF during exploration. Because no raptor nests are documented to occur within 1 mile of the exploration area, no additional raptor nesting surveys are planned.

### **Avian Use**

Avian use surveys will mimic the surveys completed during March through September 2011 and utilize the same sampling locations and schedule as described in the Exploratory EA. The objective of the avian use surveys is to provide background information that can be used to estimate the level of risk exploratory testing might have on birds in the Project area. Surveys will be completed prior to and during exploratory testing to characterize bird use in the Project area (**Figure 2**). Surveys at nine points will be conducted for 20 minutes each on a twice-monthly basis during. All birds seen during each survey will be recorded, as well as observations made while in transit between points.

### **Big Game and Other Wildlife**

Concurrent with the avian use surveys described above, big game and all other wildlife observed during the avian surveys will be documented to provide information that can be used to estimate potential impacts. All observations of big game will be documented while traveling between points in the Project area.

## **2.3 Survey Reporting**

Monitoring reports will be prepared following each year's survey effort and submitted to the BLM within 1 month of completion of each year's survey effort. A final monitoring report will be prepared after year two, summarizing the data and findings from the year one and two surveys within two months of completion of the study. Both the year one and final report will include a written description of the methods, data analysis, and a discussion of the results for meeting the study objectives and estimating impacts.

## **3.0 Rescue, Recovery, Reporting, and Rehabilitation of Injured Wildlife**

Employees and subcontractors of Peak Minerals have a responsibility to comply with all environmental laws and regulations. Most birds that occur in the project area are protected by the federal Migratory Bird Treaty Act and eagles are further protected by the Bald and Golden Eagle Protection Act. Under these federal statutes it is illegal to take or collect birds that may be found in the project. Furthermore, human health and safety can be at risk when in contact with dead or injured wildlife.

The following Wildlife Incident Reporting and Handling System (WIRHS) procedures are to be followed when Project personnel or others discover an animal fatality or injury while on site. These procedures are intended to be in place for the life of the Project and are independent of any monitoring studies.

### **3.1 Wildlife Mortality Procedures**

For the purposes of this reporting system, *incident* is a general term that refers to any animal or evidence thereof, that is found either dead or injured within the wind project. Note that an incident may include an injured animal and does not necessarily indicate death as in a carcass or fatality. An intact carcass, carcass parts, bones, or scattered feathers or an injured animal are all considered reportable incidences. All such discoveries will be reported.

Prior to assuming an animal is injured, it should be observed to determine whether it cannot or does not display normal behaviors. For example, raptors will occasionally walk on the ground, especially if they have captured a prey item. Raptors also "mantle" or hold their wings out and down covering a prey item. These types of behaviors may make the wings appear broken or the animal injured.

Any animal fatality or injury observed will be immediately reported to the site supervisor or the onsite person responsible for implementing the WIRHS. No animal should be handled or harassed in any way. Only qualified personnel who are trained and permitted to implementing the WIRHS will be authorized to handle dead or injured animals.

Note: Any incident involving a threatened or endangered species or a bald or golden eagle must be reported to USFWS within 24 hours of identification, so prompt response is needed for such discoveries.

#### **3.1.1 MATERIALS NEEDED TO RECOVER/REPORT AN INCIDENT**

The supplies needed for this WIRHS will be contained in a "run-kit" available to personnel responsible for the implementing WIRHS response. The run-kit includes the following items:

- A copy of this WIRHS
- Wildlife Incident Report Forms
- Project Personnel Listing and Contact Information
- Sharpie, Pencils, Pens
- 3 x 5 cards
- Ziploc freezer storage bags – quart size, gallon size
- Zip ties
- Garbage bags
- Disposable gloves
- Camera
- Large forceps
- Flagging
- Dark cloth bag or towel

Leather gloves for handling injured large birds  
Animal carrier suitable for transporting injured birds  
Shoebox with a soft cloth and air holes punched for transporting injured bats

### **3.1.2 INCIDENT RECOVERY AND REPORTING PROCEDURES (to be implemented by qualified staff only):**

If a dead or injured animal is found, the following procedures should be followed:

1. If the incident discovered is an injured bird, initially move to a distance far enough away that it is not visibly disturbed or uneasy due to your presence. Follow the procedures for reporting and care of injured wildlife found below. If the incident discovered is a fatality or injured bat the following procedures apply.
2. Initially, leave the subject animal in place. A flag may be used to mark its location for easy finding while specific data are being recorded. If it is a fatality, it is best to leave the subject animal in place until all the data are recorded. It is recommended that any flagging be marked with the date, time and initials of the recorder.
3. Prepare a Wildlife Incident Report Form. The form and instructions for filling out the form are provided below.
4. For animals that can be stored in Ziploc bag or trashbag (not large mammals), prepare a 3x5 card label that includes the exact date and time of the find and the observer's initials that are recorded on the Wildlife Incident Report Form. Use a Sharpie to record information on the label and write in large letters. This label is critical to correlating the carcass and photographs back to the data forms in the future and will be bagged and stored with the carcass.
5. Photograph the incident as it was found in the field. Take at least two pictures: a close up shot of the animal as it lays in the field and a broader view of the animal (marked by a flag) with local features in the view. For the close up picture lay the 3x5 card label marked with the date, time and initials of the recorder facing up next to the carcass so that it appears in the picture.
6. Following completion of the report form and photographs, the fatality should be collected if it is protected under the MBTA or BGEPA and you are authorized to handle and collect such species. In the case of a scavenged mortality or feather spot it is important to collect all parts so that it is not encountered and counted again at a later date. The fatality or parts should be bagged in a Ziploc freezer bag or garbage bag in the case of larger birds. The 3x5 card label should be included in a second Ziploc bag with the bag holding the actual animal (double bagged). It is advisable to use plastic disposable gloves to collect casualties for hygiene and potential disease considerations.

Due to disease considerations and safety, dead or injured bats should not be handled or collected without personal protective gear such as disposable gloves. These and other

mammals should be left where they are found unless their location compromises human safety or project operations. If so, these animals should be removed to an appropriate area.

As soon as possible after the fatality is collected it should be stored in the site freezer and an entry completed in the freezer or book. Follow the instructions on the freezer log book for logging fatalities into the freezer. Include the 3x5 card label double bagged with the fatality in the freezer. A log of all dead or injured wildlife should be maintained and copies provided to agency representatives (see list of contacts) on an annual basis.

Any incident involving a State or Federally listed threatened or endangered species or bald or golden eagle must be reported to the USFWS within 24 hours of the discovery. These finds will be reported to the agency verbally by the Program Manager. See project personnel listing for contact information.

### **3.2 Wildlife Injury Procedures**

As with fatalities, observations of injured wildlife should be immediately reported to the site supervisor or the onsite person responsible for implementing the WIRHS. No animal should be handled or harassed in any way. Only qualified personnel who are trained and permitted to implementing the WIRHS will be authorized to handle dead or injured animals.

1. Contact the appropriate agency personnel responsible for the injured animal species in question (see contact list). If the injured animal is found after normal weekday office hours, leave a message (if possible) and report it again the next available working day.
2. If staff can't reach the appropriate agency contact, phone the designated wildlife rehabilitator for the project (see contact list) and request further instruction. The rehabilitation center is required to report any injured raptor to the USFWS within 24 hours. If the injured bird is an eagle or has been shot, the rehabilitator will report this to the UDWR and U.S. Fish & Wildlife Service law enforcement.
3. Fill out a Wildlife Incident Report Form as for a fatality, but first, the primary objective is to provide immediate care for the injured animal. Place incident form in log book maintained for animal fatalities.

### **3.3 Agency and Organization Contact Information**

**US Fish and Wildlife Service**  
Contact Name: Nathan Darnall  
2369 West Orton Circle  
Suite 50  
West Valley City, UT 84119  
Phone: 801.975.3330



**Utah Division of Wildlife Resources**

Contact Name: Keith Day  
POB Box 606  
1470 North Airport Rd.  
Cedar city, UT 84721  
Phone: 435.865.6100

**Wildlife Rehabilitation Center**

Contact Name: Martin Tyner  
Southwest Wildlife Foundation, Inc.  
POB 1907  
Cedar City, UT 84721  
Phone: 435.586.4693

## **4.0 Mitigation and Adaptive Management Strategies**

### **4.1 Impact Avoidance and Minimization Measures**

This section identifies methods to avoid and minimize potential impacts to wildlife:

Traffic – vehicle speeds will be restricted to 35 miles per hour within the leased areas

Trash – all trash generated by the Project activities will be contained at all times

Noxious weeds – at the hydrologic well locations outside the lakebed, disturbed areas will be re-seeded with a native seed mixture

Lighting – work will be conducted during daylight hours, so no lighting will be needed

Habitat impacts – the lakebed surface will be disturbed, but not altered, since no vegetation is present. The hydrologic well pad locations will be temporarily disturbed, but reclaimed following well installation

### **4.2 Adaptive Management**

If the avoidance and minimization measures proposed in Section 4.1 and in the Exploratory EA have not been sufficient in reducing project impacts to an acceptable level, the supplemental measures listed below may be considered for implementation. Mitigation measures would be incorporated to this Wildlife Mitigation and Monitoring Plan in response to specific issues identified during monitoring and may include such actions as:

- Expand or continue postconstruction monitoring study to more accurately identify areas of high risk and make modifications to the project based on this information.
- Provide assistance to the USFWS with funding of an MBTA- or avian-related conservation project in an amount commensurate with the measured project impacts.

- Provide assistance to the UDWR with funding of a conservation project of their interest in an amount commensurate with the measured project impacts.
- Provide opportunities to enhance wildlife populations through implementation of habitat enhancement techniques on nearby BLM-administered land.

## 5.0 Literature Cited

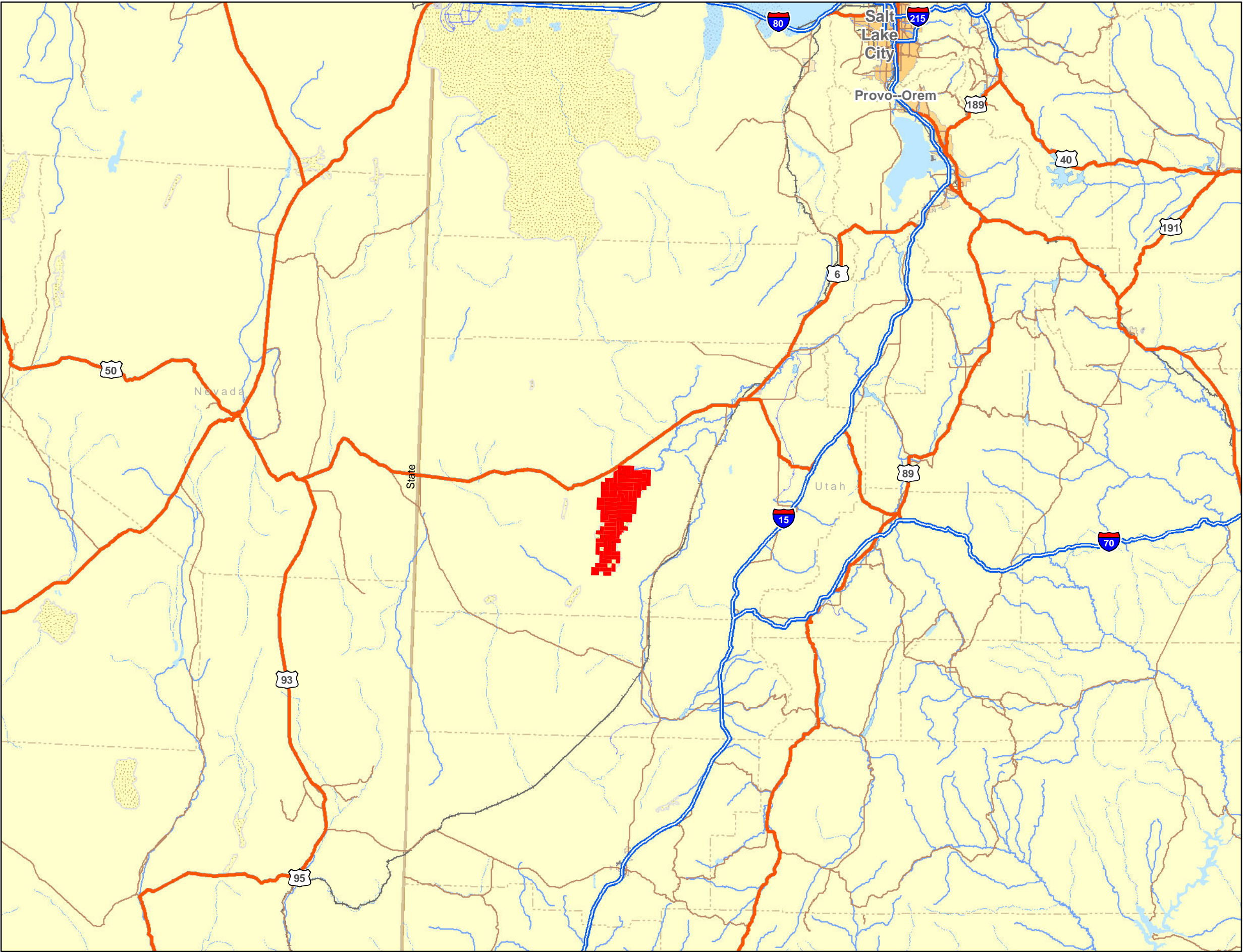
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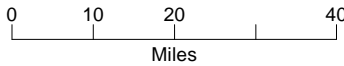
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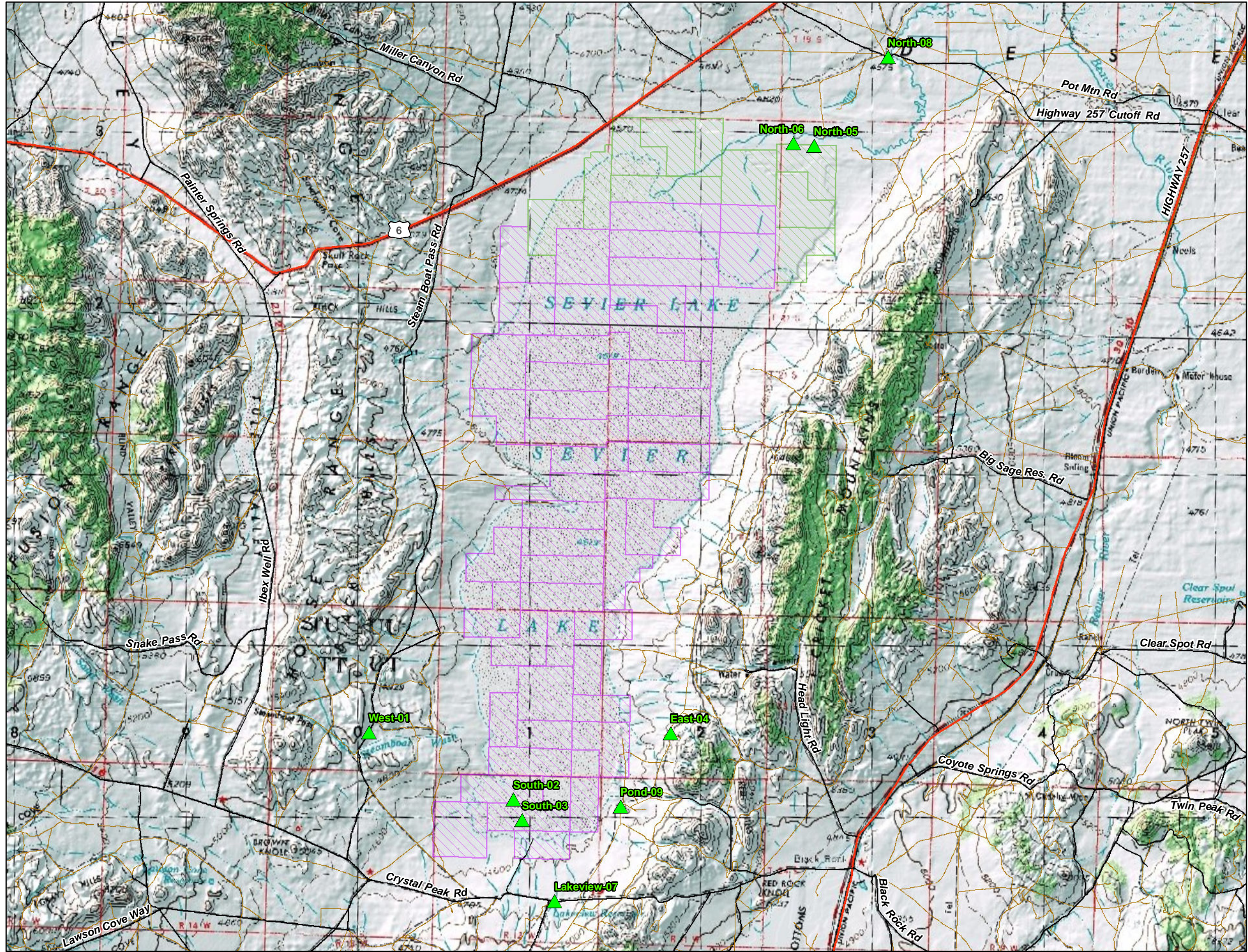
**LEGEND**

■ Project Area



**Project Location**  
**Sevier Lake Area Exploration Plan**





**LEGEND**

- ▲ Avian Point Count Location
- ▨ Kline Lease
- ▨ Peak Lease
- Limited Access
- County Maintained Road
- Highway
- Minor Highway
- Non-County Maintained Road



Avian Point Count Locations  
Sevier Lake Area Exploration Plan

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